

AMENDMENT TO THE CLAIMS

The present document amends claims 1, 9-12, 93, 94, 96 and 97 and adds claims 100-122. According to 37 C.F.R. § 1.121(c), after entry of the present amendment, the status of the claims in the case is as follows:

1. (Currently Amended) A composition comprising a purified monoclonal antibody, or antigen-binding fragment thereof, wherein said antibody binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.
2. (Original) The composition of claim 1, wherein said antibody further binds to phosphatidic acid and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidic acid.
3. (Original) The composition of claim 1, wherein said antibody further binds to phosphatidylinositol and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylinositol.
4. (Original) The composition of claim 1, wherein said antibody further binds to phosphatidylglycerol and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylglycerol.

5. (Original) The composition of claim 1, wherein said antibody further binds to cardiolipin and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to cardiolipin.
6. (Original) The composition of claim 1, wherein said antibody further binds to phosphatidic acid, phosphatidylinositol, phosphatidylglycerol and cardiolipin and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to each of phosphatidic acid, phosphatidylinositol, phosphatidylglycerol and cardiolipin.
7. (Original) The composition of claim 1, wherein said antibody further binds to phosphatidylethanolamine.
8. (Original) The composition of claim 7, wherein said antibody further binds to phosphatidylethanolamine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylethanolamine.
9. (Currently Amended) The composition of claim 1, wherein said antibody has substantially the same phospholipid binding profile as the monoclonal antibody 3G4 (ATCC PTA 4545) ~~as set forth in Table 4;~~ wherein the phospholipid binding profile of the monoclonal antibody 3G4 (ATCC PTA 4545), as determined by relative strength of reactivity on an ELISA, is PS=PA=PI=PG=CL>>PE, wherein > indicates at least 2-fold difference in phospholipid binding and >> indicates at least 10-fold difference in phospholipid binding, each at identical antibody concentrations.

10. (Currently Amended) The composition of claim 1, wherein said antibody has an affinity for phosphatidylserine of at least equal to the affinity of the monoclonal antibody 3G4 (ATCC PTA 4545) for phosphatidylserine ~~as set forth in Table 3~~; wherein the affinity of the monoclonal antibody 3G4 (ATCC PTA 4545) for phosphatidylserine, as determined in an ELISA, has an EC_{50} value of 0.040 μ g/ml.

11. (Currently Amended) The composition of claim 1, wherein said antibody has substantially the same phospholipid binding profile as the monoclonal antibody 3G4 (ATCC PTA 4545), ~~as set forth in Table 4~~, and has an affinity for phosphatidylserine of at least equal to the affinity of the monoclonal antibody 3G4 (ATCC PTA 4545) for phosphatidylserine, ~~as set forth in Table 3~~; wherein the phospholipid binding profile of the monoclonal antibody 3G4 (ATCC PTA 4545), as determined by relative strength of reactivity on an ELISA, is PS=PA=PI=PG=CL>>PE, wherein > indicates at least 2-fold difference in phospholipid binding and >> indicates at least 10-fold difference in phospholipid binding, each at identical antibody concentrations; and wherein the affinity of the monoclonal antibody 3G4 (ATCC PTA 4545) for phosphatidylserine, as determined in an ELISA, has an EC_{50} value of 0.040 μ g/ml.

12. (Currently Amended) The composition of claim 1, wherein said antibody is ~~a monoclonal~~ an IgM antibody or antigen-binding fragment thereof.

13. (Original) The composition of claim 1, wherein said antibody is an IgG antibody.

14. (Original) The composition of claim 1, wherein said antibody is an antigen-binding fragment of an antibody.

15. (Original) The composition of claim 14, wherein said antibody is an scFv, Fv, Fab', Fab, diabody, linear antibody or F(ab')₂ antigen-binding fragment of an antibody.

16. (Previously Presented) The composition of claim 14, wherein said antibody is a univalent fragment, camelized or single domain antibody.

17. (Original) The composition of claim 1, wherein said antibody is a human, humanized or part-human antibody or an antigen-binding fragment thereof.

18. (Original) The composition of claim 17, wherein said antibody comprises an antigen-binding region of said antibody operatively attached to a human antibody framework or constant region.

19. (Previously Presented) The composition of claim 1, wherein said antibody is a chimeric, bispecific, recombinant or engineered antibody.

Claims 20, 21 and 22 canceled

23. (Original) The composition of claim 1, wherein said antibody is prepared by a process comprising immunizing an animal with activated endothelial cells and selecting from the immunized animal an antibody that binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

Claims 24-50 canceled

51. (Previously Presented) The composition of claim 1, wherein said composition is a pharmaceutically acceptable composition.

52. (Original) The composition of claim 51, wherein said pharmaceutically acceptable composition is formulated for parenteral administration.

Claims 53-92 canceled

93. (Currently Amended) A composition comprising a purified anti-phosphatidylserine monoclonal antibody, or antigen-binding fragment thereof, wherein said antibody binds to substantially the same epitope as the monoclonal antibody 3G4 (ATCC PTA 4545).

94. (Currently Amended) A composition comprising a purified monoclonal antibody that binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

95. (Previously Presented) An antibody, or antigen-binding fragment thereof, that binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine, wherein said antibody is prepared by a process comprising immunizing an animal with activated endothelial cells and selecting from the immunized animal an antibody that binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

96. (Currently Amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a biologically effective amount of a purified monoclonal antibody, or antigen-binding fragment thereof, wherein said antibody binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

97. (Currently Amended) A purified monoclonal antibody, or antigen-binding fragment thereof, wherein said antibody binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

98. (Previously Presented) A hybridoma that produces a monoclonal antibody that effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

99. (Previously Presented) A method for preparing an anti-phosphatidylserine antibody that binds to substantially the same epitope as the monoclonal antibody 3G4 (ATCC PTA 4545), comprising immunizing an animal with activated endothelial cells and selecting from the immunized animal an anti-phosphatidylserine antibody that effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

100. (New) The composition of claim 1, wherein said antibody binds to phosphatidylserine in combination with a protein cofactor.

101. (New) The composition of claim 1, wherein said antibody binds to phosphatidylserine in an ELISA that comprises:

- (a) adding phosphatidylserine to a solid support;
- (b) blocking with a blocking buffer comprising 10% serum;
- (c) adding a primary antibody diluted in said blocking buffer, wherein said primary antibody is said antibody or antigen-binding fragment thereof, that binds to phosphatidylserine; and
- (d) detecting bound primary antibody using a secondary antibody that binds to said primary antibody.

102. (New) The composition of claim 101, wherein said blocking buffer comprises 10% bovine serum.

103. (New) The composition of claim 9, wherein said ELISA comprises:

- (a) adding phosphatidylserine to a solid support;
- (b) blocking with a blocking buffer comprising 10% serum;
- (c) adding a primary antibody diluted in said blocking buffer, wherein said primary antibody is said antibody or antigen-binding fragment thereof, that binds to phosphatidylserine; and
- (d) detecting bound primary antibody using a secondary antibody that binds to said primary antibody.

104. (New) The composition of claim 103, wherein said blocking buffer comprises 10% bovine serum.

105. (New) The composition of claim 1, wherein said antibody is the monoclonal antibody 3G4 produced by hybridoma ATCC PTA 4545.

106. (New) A composition comprising purified monoclonal antibody 3G4 produced by hybridoma ATCC PTA 4545.

107. (New) A composition comprising a purified antibody, wherein a human antibody framework or constant region is operatively attached to an antigen-binding region of an antibody that binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.

108. (New) The pharmaceutical composition of claim 96, wherein said antibody binds to phosphatidylserine in combination with a protein cofactor.

109. (New) The pharmaceutical composition of claim 96, wherein said antibody binds to phosphatidylserine in an ELISA that comprises:

- (a) adding phosphatidylserine to a solid support;
- (b) blocking with a blocking buffer comprising 10% serum;
- (c) adding a primary antibody diluted in said blocking buffer, wherein said primary antibody is said antibody or antigen-binding fragment thereof, that binds to phosphatidylserine; and
- (d) detecting bound primary antibody using a secondary antibody that binds to said primary antibody.

110. (New) The pharmaceutical composition of claim 109, wherein said blocking buffer comprises 10% bovine serum.

111. (New) The pharmaceutical composition of claim 96, wherein said antibody is the monoclonal antibody 3G4 produced by hybridoma ATCC PTA 4545.

112. (New) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a biologically effective amount of purified monoclonal antibody 3G4 produced by hybridoma ATCC PTA 4545.

113. (New) The purified antibody of claim 97, wherein said antibody binds to phosphatidylserine in combination with a protein cofactor.

114. (New) The purified antibody of claim 97, wherein said antibody binds to phosphatidylserine in an ELISA that comprises:

- (a) adding phosphatidylserine to a solid support;
- (b) blocking with a blocking buffer comprising 10% serum;
- (c) adding a primary antibody diluted in said blocking buffer, wherein said primary antibody is said antibody or antigen-binding fragment thereof, that binds to phosphatidylserine; and
- (d) detecting bound primary antibody using a secondary antibody that binds to said primary antibody.

115. (New) The purified antibody of claim 114, wherein said blocking buffer comprises 10% bovine serum.

116. (New) The purified antibody of claim 97, wherein said antibody is the monoclonal antibody 3G4 produced by hybridoma ATCC PTA 4545.

117. (New) Purified monoclonal antibody 3G4 produced by hybridoma ATCC PTA 4545.

118. (New) The hybridoma of claim 98, wherein said antibody binds to phosphatidylserine in combination with a protein cofactor.

119. (New) The hybridoma of claim 98, wherein said antibody binds to phosphatidylserine in an ELISA that comprises:

- (a) adding phosphatidylserine to a solid support;
- (b) blocking with a blocking buffer comprising 10% serum;
- (c) adding a primary antibody diluted in said blocking buffer, wherein said primary antibody is said antibody or antigen-binding fragment thereof, that binds to phosphatidylserine; and
- (d) detecting bound primary antibody using a secondary antibody that binds to said primary antibody.

120. (New) The hybridoma antibody of claim 119, wherein said blocking buffer comprises 10% bovine serum.

121. (New) The hybridoma of claim 98, wherein said antibody is the monoclonal antibody 3G4 produced by hybridoma ATCC PTA 4545.

122. (New) A composition comprising a purified antibody, or antigen-binding fragment thereof, wherein said antibody binds to phosphatidylserine and effectively competes with the monoclonal antibody 3G4 (ATCC PTA 4545) for binding to phosphatidylserine.